HIT Standards Committee Testimony
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Objective
Discuss approaches to the standards used for secure point-to-point (P2P) transport of health data between provider organizations.

Approach
For discussion today- emphasis is being placed on the Medical Data Exchange (MDE), a "push" exchange. However, there are alternative technologies not used in MDE that Verizon finds suitable for a P2P exchange.

Enabling the Health Care Ecosystem
There are many challenges with health information sharing today. As such, Verizon has simplified the method in which to exchange information with the Medical Data Exchange (MDE). Verizon has taken an unconventional approach to accelerate information sharing and jumpstart the initiative. MDE doesn't care if the patient information you're sending is structured or unstructured. If the end user can accept it, MDE will send it.

Authenticating End Points
Verizon MDE is web services and uses SSL certificates to verify the identity endpoints. Organizations go through a certification process before receiving a certificate. The certification process is not specific to the Medical Data Exchange but is an overall "good practices" certification based on our Security Management Program.

The certificates are attached to requests made to the MDE to authenticate the request before any data retrieval is completed. If the request authenticates successfully, the request is processed, and the response contains the requested information.

Encryption
MDE uses Transport Layer Security (TLS) over HTTPS to ensure proper encryption while the data is being transported. For a machine or user talking to the exchange, TLS will be used. Data traversing with be signed and encrypted as well as data at rest will be signed and encrypted.

Assuring that data is not modified in transit

All data traversing the exchange is signed and encrypted. To ensure the message sent is the message received, hashing should be used and compared when the message sent and received.

Messaging Protocol
The concepts underlying the Verizon Medical Data Exchange (MDE) are API-driven RESTful web services. The distributed Software Development Kits (SDKs) authenticate with, and submit requests to the Verizon MDE over a secure HTTP channel. SDK languages include JAVA, .Net, and Ruby on Rails. We will add a SOAP interface to support IHE XDR.

The Verizon Medical Data Exchange routes messages to physicians and other health care professionals through Service Providers. MDE is also incorporating a Healthcare Provider Portal to allow all health care professionals to have an "inbox" to receive information.

MDE is complementary to other exchanges. MDE will promote and support technology interoperability initiatives like Integrating the Healthcare Enterprise (the XDR protocol of IHE), and the Direct Project.

Confirming the receipt of messages
MDE supports confirming the receipt of messages via transport level acknowledgements and receipts. Machine level and user level acknowledgement are also supported. Receipt messages are logged. Messages that are not delivered are marked as such in the upload interface.

Additional Questions

- What factors affected your decision to implement P2P messaging as you did? Would you make the same decision if you were designing it today?

Verizon built the Medical Data Exchange with the input of Consortium members so we received feedback continually on the tools we used. Since MDE is less than a year old, we would implement the same if we were designing today.

- What do you consider essential requirements for simple, P2P exchanges between two provider organizations?

Verizon believes in a crawl, walk, run approach. As such, as long as an organization has an Internet connection, the ability to "certify" a safe environment, and a secure pipe - organizations should be able to exchange information. Data should be able to be moved in any format whether structured or not.

- Do you exchange information with any federal organizations using the NHIN CONNECT gateway? If so, how is that accomplished?

We do not exchange information with any federal organizations using the NHIN CONNECT gateway as of yet. Verizon does have a Health Information Exchange (VHIE) that does connect to the NHIN Connect Gateway and will connect to MDE. Additionally, Verizon is a part of the Direct Project Implementation Group and is working to ensure we are able to support the efforts of the Direct Project.